

# BROADBAND EXPANSION GRANT APPLICATION

## For Fiscal Year 2022

 Public Service Commission of Wisconsin  
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Primary Applicant (Name and Address):  <b>CTC Telcom, Inc. dba Mosaic Technologies</b> <b>Cumberland - Shell Lake - Spooner Highway 63</b> <b>FTTP Broadband Expansion</b>  <b>CTC Telcom, Inc., dba Mosaic Technologies</b> <b>401 South First Street</b> <b>Cameron, WI 54822</b>  <b>In partnership Washburn County &amp; Washburn County</b> <b>Economic Development Corporation</b>	Applications MUST be UPLOADED to ERF via the Commission's website, <a href="http://psc.wi.gov/apps35/ERF_upload/content/mymenu.aspx">http://psc.wi.gov/apps35/ERF_upload/content/mymenu.aspx</a> . Refer to section 2.3 for detailed instructions.  Applications are due and MUST be uploaded to ERF no later than: <b>March 17, 2022</b> at 4:00pm (16:00) Central Time. <b>Late applications will not be accepted.</b>	
	Contact for further information: <a href="mailto:PSCStatebroadbandoffice@wisconsin.gov">PSCStatebroadbandoffice@wisconsin.gov</a>	
	Date: December 1, 2021	
The Public Service Commission of Wisconsin is seeking applications for Broadband Expansion Grants. The Commission may award one or more grants during Fiscal Year 2022 to public and private entities that meet the eligibility requirements set forth in Wis. Stat. § 196.504. This grant round will be funded with bond proceeds authorized by the Wisconsin Building Commission pursuant to Wis. Stat. § 13.48(30). As such, successful applicants are subject to the requirements of Wis. Stat. § 13.48(30). Successful applicants will demonstrate a clear and achievable plan to improve broadband communications services in one or more underserved areas in the State.		
<b>Applicant Certification:</b> In signing this application, the undersigned verifies under penalty of perjury that the Applicant and its employees and agents have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition with respect to this application; that no attempt has been made to induce any other person or firm to submit or not to submit an application; that this application has been independently arrived at without collusion with any other proposer, competitor or potential competitor; that this application has not been knowingly disclosed prior to the opening of applications to any other applicant or competitor; that all of the responses and representations of Applicant in this application are true and correct to the best of the undersigned's knowledge, information, and belief; and that Applicant agrees to, accepts, and will comply with all of the terms and conditions respecting this application and any award of a broadband expansion grant as may be established in a grant award Agreement.		
Name of Authorized Representative (Type or Print)  <b>Domenico Fornaro</b>	Title  <b>CEO</b>	Phone (    )  <b>715-458-5400</b>
Signature of Authorized Representative  	Date  <b>March 16, 2022</b>	

## SUMMARY OF GRANT APPLICATION

Primary Applicant Name <b>CTC Telcom, Inc. DBA Mosaic Technologies</b>	Amount of Broadband Grant Request (round to nearest dollar) <b>\$2,685,477 (67.2%)</b>
Federal Employer Identification No. <b>39-1868406</b>	Amount of Matching Funds Pledged (round to nearest dollar) <b>\$1,312,500 (32.8%)</b>
Contact Name and Title <b>Domenico Fornaro, CEO</b>	Total Cost of Proposed Project (round to nearest dollar) <b>\$3,997,977</b>
Telephone Number <b>715-458-5400</b>	Project Name <b>Cumberland - Shell Lake - Spooner FTTP Broadband Expansion</b>
E-mail Address(es) <b>dfornero@experienceMosaic.com</b>	Type of Proposed Broadband Service (FTTH, Cable, DSL, etc.) <b>Fiber-to-the-Premises (FTTP)</b>
Grant Manager, if different than Primary Applicant	Grant Manager Federal Employer Identification No.
Grant Manager Contact Name	Grant Manager Email Address and Telephone Number
If the application proposes a public-private partnership, list the names, addresses, and FEINs of the partner companies or organizations <b>Washburn County, 304 2nd Street, Shell Lake, WI 54871; FEIN 39-6005753</b> <b>Washburn County Economic Development Corporation, 208 Vine St., Spooner, WI 54871; FEIN 43-1996476</b>	
Brief Project Description <b>This project provides Fiber to the Premises broadband and backbone transport to communities and areas between Cumberland and Spooner along US Highway 63.</b>	
Maximum Proposed Download Transmission Speed <b>10,000 Mbps</b>	Maximum Proposed Upload Transmission Speed <b>10,000 Mbps</b>
Minimum Proposed Download Speed Available To Purchase <b>25 Mbps</b>	Minimum Proposed Upload Transmission Speed Available To Purchase <b>10 Mbps</b>
County or Counties served by this project <b>Washburn and Barron</b>	Community or Communities served by this project <b>Cities and Villages of Barronett, Cumberland, Shell Lake &amp; Spooner</b>
List of the broadband service providers, if any, currently serving the area the applicant proposes to serve <b>CenturyLink</b>	

Does proposed project serve an <i>unserved</i> area of the State, as defined in <u>Section 1.4</u> of the application instruction? (yes/no) <b>Yes</b>	Is the Applicant certified as a Broadband Forward! Community or Telecommuter Forward! Community, or does the grant project propose to serve a Broadband Forward! Community or Telecommuter Forward! Community? (yes/no) <b>Yes</b>
For last mile projects or component the expected number of Business Locations that will have access to the improved broadband service (i.e., total business locations passed or with new service access). <b>259</b>	For last mile projects or components the expected number of Residential Locations that will have access to the improved broadband service (i.e., total residential locations passed or with new service access). <b>275</b>
Of the improved business locations, how many locations are <i>unserved</i> ? <b>Uncertain</b>	Of the improved residential locations, how many are <i>unserved</i> ? <b>Approximately 128</b>
For providers that are eligible telecommunications carriers will the proposed broadband service be available to Lifeline customers? (yes/no) <b>Yes</b>	Are there any programs available for low-income households to access low-cost service or discounts? (yes/no) <b>Yes: Lifeline, and ACP for Broadband</b>
Is the internet service provider currently participating in the Emergency Broadband Benefit Program? (yes/no) <b>Yes, EBB and ACP.</b>	Is the internet service provider currently participating in the Department of Public Instruction and CESA purchasing's Digital Learning Bridge? (yes/no) <b>Yes</b>
Did the internet service provider participate in the Public Service Commission's voluntary Broadband Coverage Data Collection in 2021? (yes/no) <b>Yes</b>	

### Application Table of Contents

Summary of Project Budget and Funding Statement	Page 4
Executive Summary	Page 9
Mandatory Application Requirements	Page 10
Exhibit A – Public Private Partnerships	Page 24
Exhibit B – Construction Cost Detail	Page 26
Exhibit C – History of Chibardun Telephone / CTC Telcom	Page 27
Exhibit D – Letters in Support of this Application	Page 29

## Summary of Project Budget and Funding Statement – Cost Categories and Revenue Sources

### FY22 Broadband Expansion Grant Application Budget & Income Summary



Please complete this form using Microsoft Excel. A PDF copy must be attached to your application as page four. In addition, this form must also be uploaded to ERF in Excel format.

#### Grant Summary

Grant Applicant:	Project:
CTC Telcom, Inc. dba Mosaic Technologies	Cumberland to Spooner Highway 63

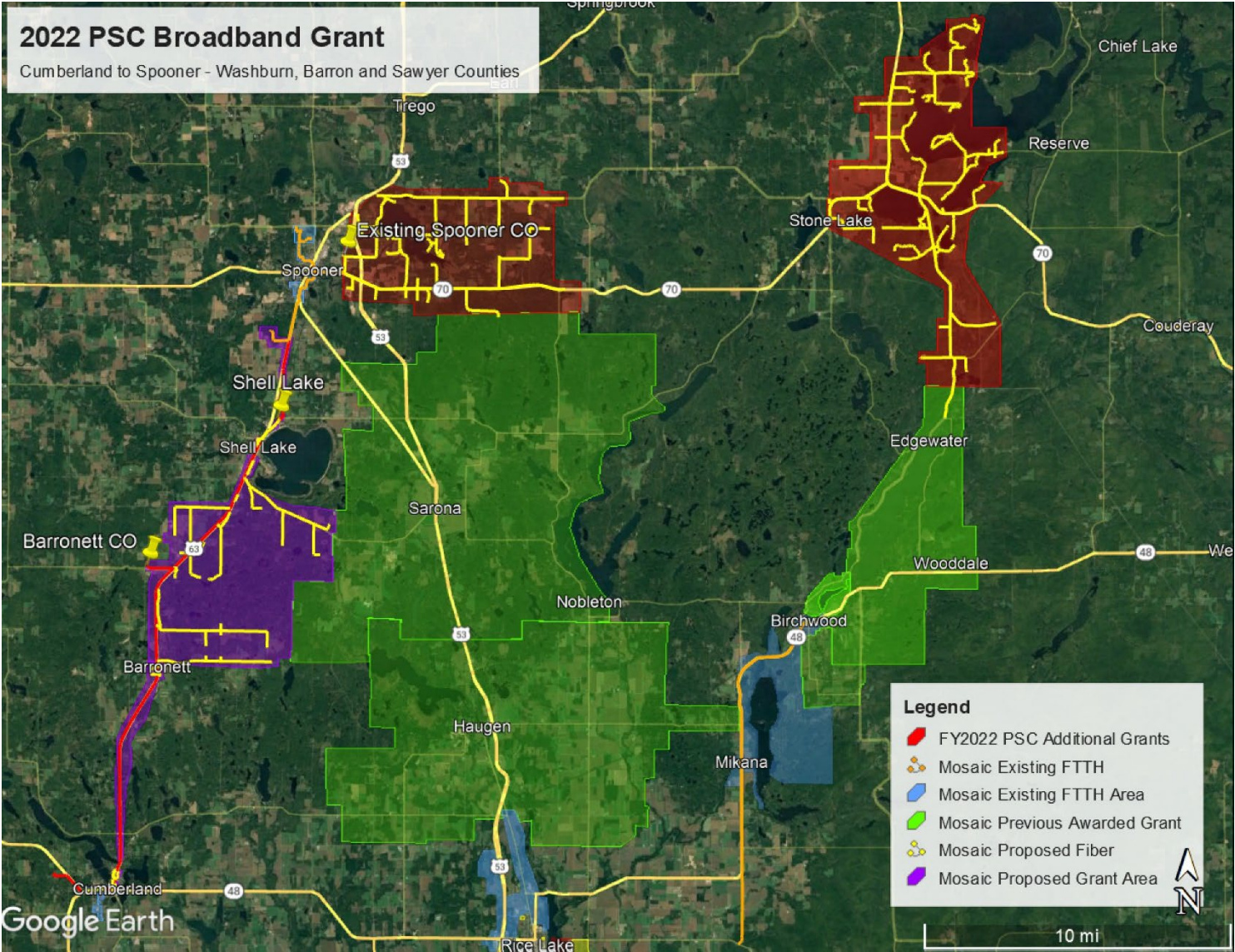
#### Budget

Line:	Description / Category:	Grant Funds:	Match:	Total:
1	Contractual, Consultant Fees	\$ 1,946,253.00	\$ 1,312,500.00	\$ 3,258,753.00
2	Equipment	\$ 422,188.00	\$ -	\$ 422,188.00
3	Supplies			\$ -
4	Labor (Salary, Fringe)	\$ 317,036.00	\$ -	\$ 317,036.00
5	Permitting, Licensing Fees			\$ -
6	Travel			\$ -
7	Other			\$ -
Total:		\$ 2,685,477.00	\$ 1,312,500.00	\$ 3,997,977.00
		32.8% match requested		

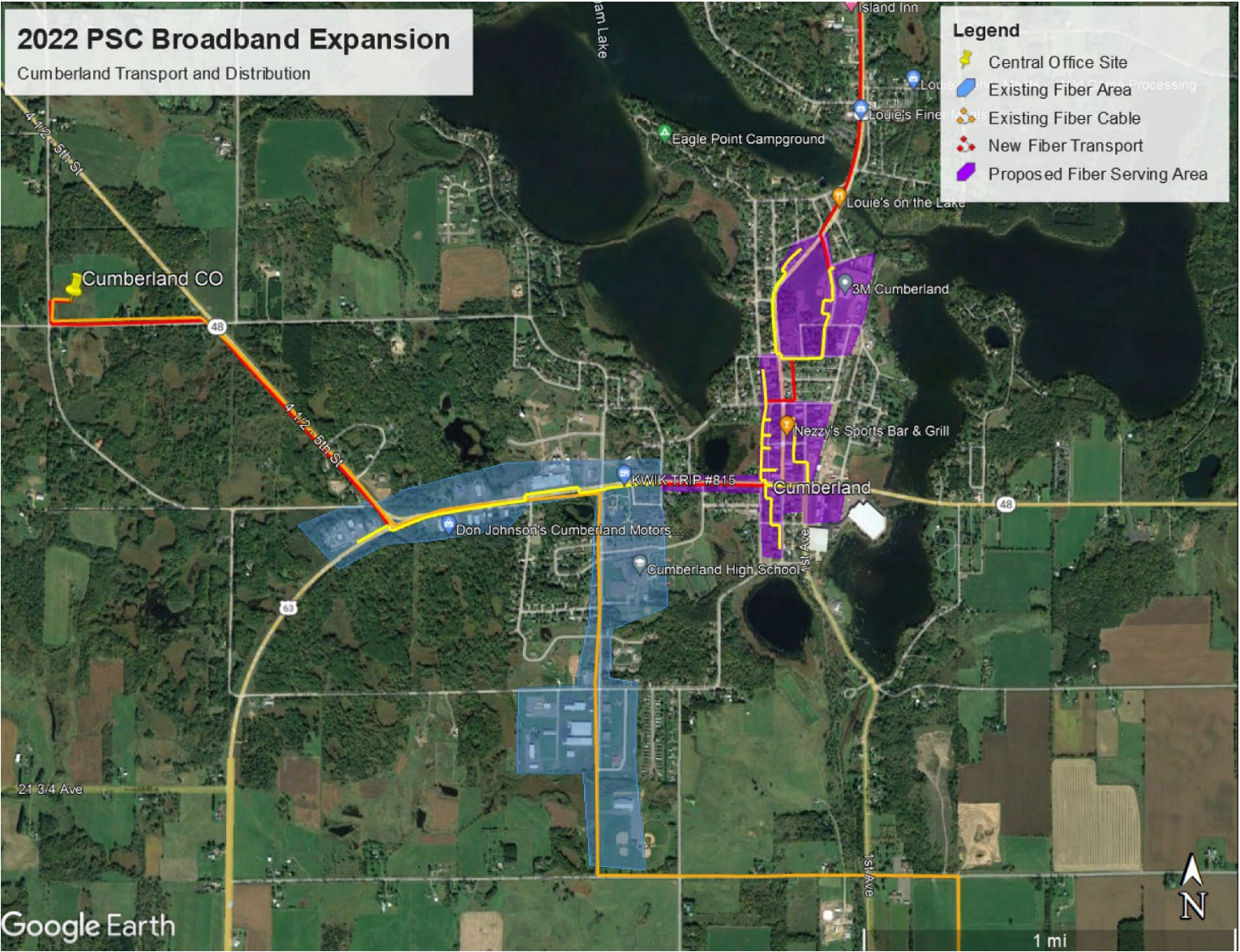
#### Pledged Contributions

#:	Entity:	Entity Type:	Pledge Type:	Pledge:
1	Mosaic Technologies	Applicant	Cash	\$ 1,300,000.00
2	Washburn County	Partner	Cash	\$ 12,500.00
3				
4				
5				
6				
7				
8				
9				
10				
Total:				\$ 1,312,500.00

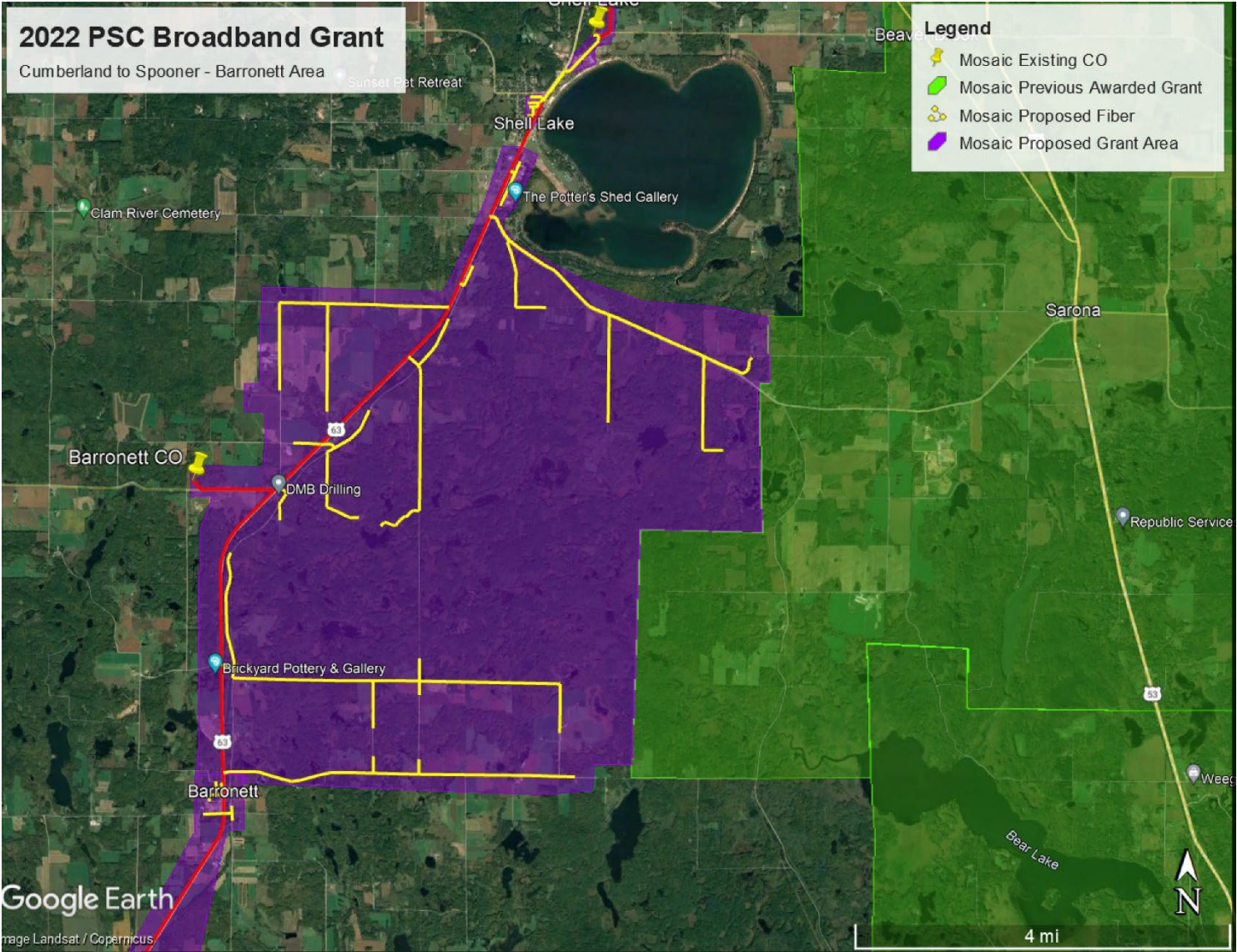
Maps of Proposed Phase I Broadband Expansion in this Application  
Overall Project Fiber Backbone, From Cumberland to Spooner



Maps of Proposed Broadband Expansion in this Application  
Cumberland Transport and Distribution Area Fiber and Service Area

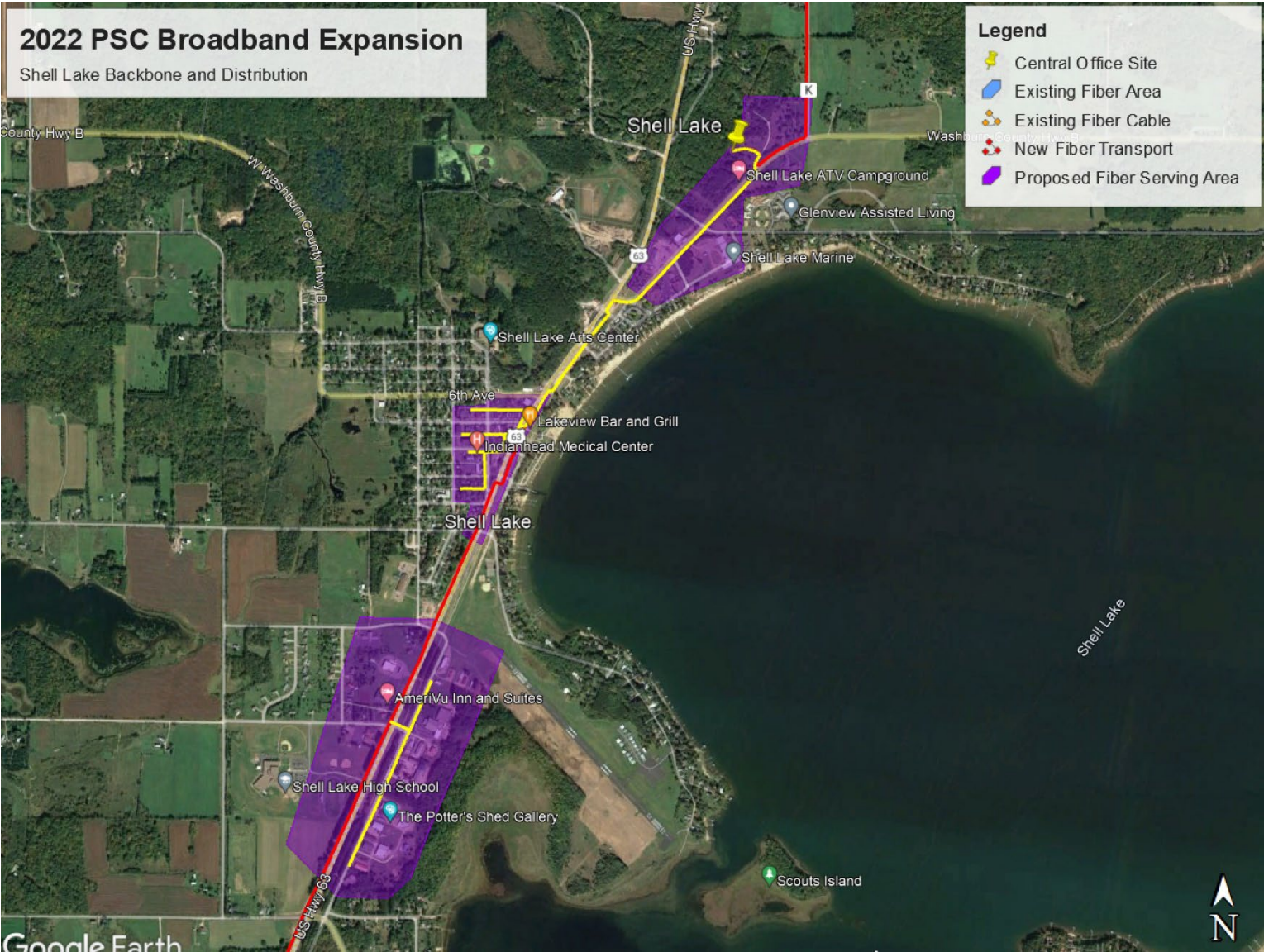


Maps of Proposed Broadband Expansion in this Application  
Barronett Service Area

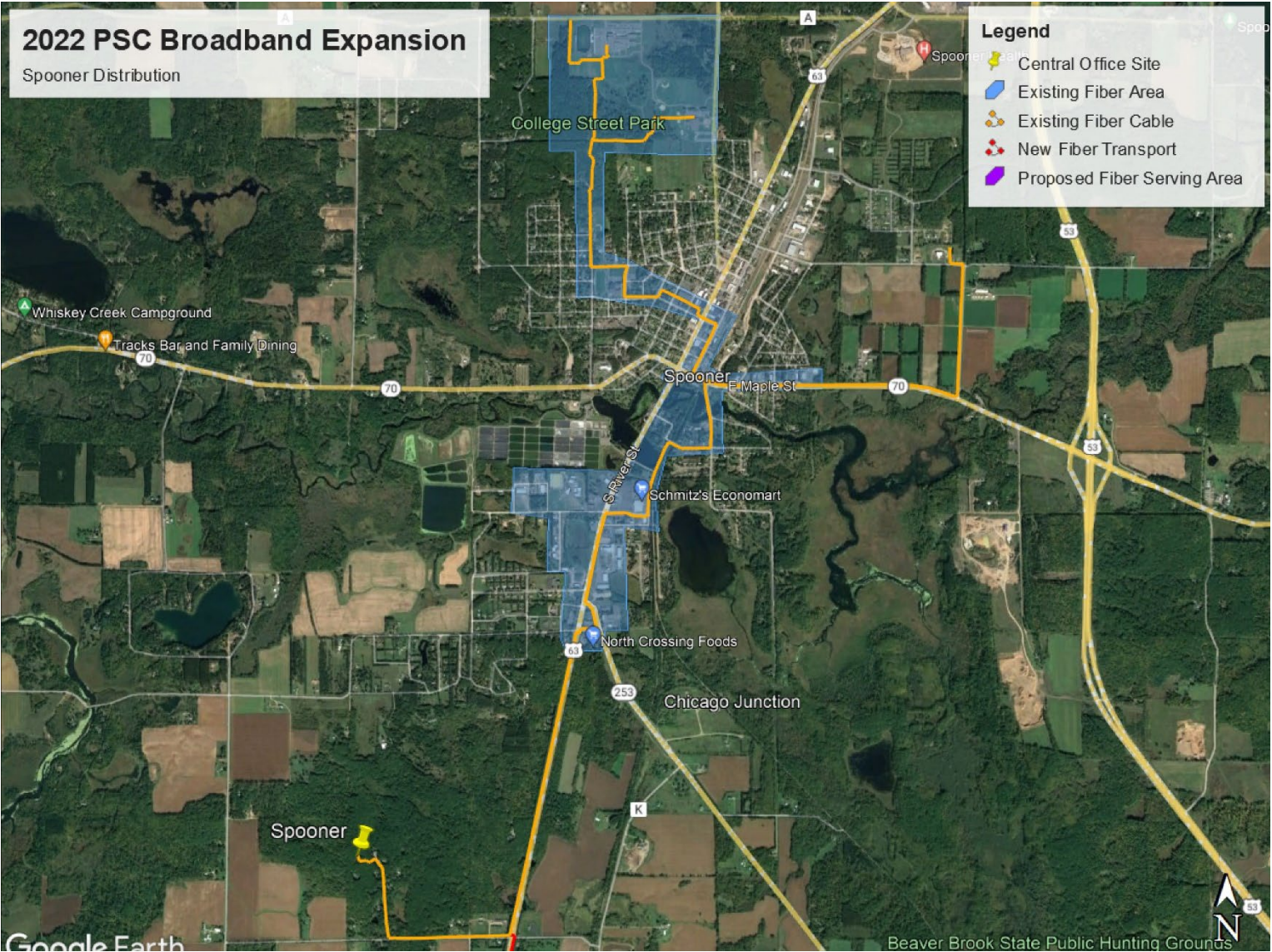


Maps of Proposed Broadband Expansion in this Application

Shell Lake Backbone and Distribution Fiber and Service Area



Maps of Proposed Broadband Expansion in this Application  
Spooner Distribution Fiber and Service Area



## **Executive Summary**

### **Cumberland—Shell Lake—Spooner FTTP Broadband**

CTC Telcom, Inc. dba Mosaic Technologies (Mosaic) requests a Fiscal Year 2022 Broadband Expansion Grant award of \$2,685,477 to construct 52.9 miles of fiber construction to provide 10Gbps capable fiber broadband to 534 locations and creating a starting point for building further into underserved areas of Barron and Washburn Counties. This application is phase one of a multi-year project to establish fiber-to-the-premise (FTTP). Mosaic will supply local loop connections to this service area as follows: 73 businesses in Cumberland, 125 businesses and 75 residences in Spooner, 56 businesses and 66 residences in Shell Lake, and 5 businesses and 134 residences in Barronett.

In addition, phase one of this project will reinforce existing business connectivity in Spooner, Cumberland, Barronett and Shell Lake. Finally, this extends a fiber transport structure that brings best-in-class business services new markets in portions of Washburn and Barron Counties.

This project reaches communities ready for fiber 10Gbps broadband that will also expand employment and incomes. It also expands Mosaic's industry best fiber-based, high-speed broadband where there are no options for adequate service. Mosaic and Washburn County will contribute \$1,312,500 in this rural hard to reach project.

In Cumberland, Mosaic has an existing fiber network and customers but doesn't serve the entire community; just a few anchor institutions (school, hospital, etc.) on the west side. Following the main highway (US Highway 63) through Cumberland and hitting the rest of the businesses including downtown would be focus for customer growth in Cumberland and allowing the rest of the community to be completed.

Shell Lake would be a new build and community. Mosaic would be focusing on transport through the city and distribution to the businesses specifically hitting downtown Shell Lake and the southern portion of the city near retail businesses and the schools. Extending further throughout the community and the nearby Shell Lake lake properties would happen then in subsequent projects.

The Village of Barronett is currently an underserved community and has a need for fiber broadband. Constructing FTTP through the village along Highway 63 and breaking off to serve a large portion of Barronett Township.

This application connects to the existing Mosaic fiber network in Spooner currently available that was previously fed with microwave links. Reutilizing this network will provide an important growth opportunity for the business community within the City of Spooner.

Constructing this fiber backbone and FTTP along the Highway 63 corridor also allows business and residential locations along its 26.6 miles to be connected to Mosaic's network well ahead of incumbent and wireless providers who will offer slower, less reliable services that will need replacement with the coming 3-5 years.

Despite the opportunity for rapid growth along Highway 63, there is only spotty access to fast broadband services in the application area. The tourism industry, fueled by people leaving larger metro areas, as well as those living in this attractive remote area, demand access to internet in order to remain here. Fiber broadband plays a pivotal role in shaping the future economic expansion to the area.

Mosaic's solution is to construct a future-proof main line and drops using a FTTP network. To minimize long-term cost and damage to fiber, Mosaic proposes to install, splice, and certify service drops concurrently with main line construction. When completed, all residential and business customers will have access to broadband speeds up to 1 Gbps as well as voice and video entertainment services.

Neither the economic nor the social impact of this project can be overstated. Funding of this project is advantageous for the following economic and social reasons:

- \* Premises in this area are underserved for current and future communications needs.
- \* Expansion of distance learning for both traditional and non-traditional students.
- \* Telecommuting becomes an option for residents of the project area. (See letters of support in Exhibit D)
- \* Business can attract patrons through technology and compete on an e-Commerce platform.
- \* Lodges and resorts can attract and retain guests needing broadband connectivity.

- \* Elimination of barriers to efficient business operations.
- \* Rural/urban healthcare access divide reduced with telehealth capabilities.
- \* Real estate values objectively increase with fiber connectivity.

This project would be a major boost to the underserved residents along Hwy 63 and the businesses in these communities who have very little internet access or are looking for increased upload internet access for their business needs. Using its current infrastructure, Mosaic proposes a comprehensive solution, including fiber drops to every home and business. Mosaic has a reputation for providing excellent products and services at reasonable cost while also supporting the communities they serve. This project is a continuation of its legacy.

### 3.2 Mandatory application requirements

#### 3.2.1 Applicant identification and contact information

- a. The name and address of the entity applying for the grant, and the mailing address, telephone number and e-mail address of one or more contact persons representing the applicant.

Name of Entity:	CTC Telcom, Inc., dba Mosaic Technologies
Mailing Address:	401 South 1 <sup>st</sup> Street, Cameron, WI 54822
Telephone Number:	715-458-5400
Contact:	Domenico Fornaro, CEO
Email address:	dfornero@experienceMosaic.com

- b. If the application proposes a public-private partnership, the identity and contact information for all application partners.

Mosaic has received overwhelming interest in this project from Washburn and Barron Counties as well as their respective communities impacted by this grant application:

The following entities are collaborating to see this project completed:

#### Public-Private Partnership Agreement

Name of Entity:	Washburn County
Mailing Address:	304 2 <sup>nd</sup> Street, Shell Lake, WI 54871
Telephone Number:	715-468-4627
Contact:	Thomas Mackie, County Board Chair

Name of Entity:	Washburn County Economic Development Corporation
Mailing Address:	208 Vine Street, Spooner, WI 54801
Telephone Number:	715-635-8242
Contact:	Joel Zimmerman, Executive Director

#### Telecommuter Forward! and Broadband Forward!

Name of Entity:	Washburn County
Mailing Address:	304 2 <sup>nd</sup> Street, Shell Lake, WI 54871
Telephone Number:	715-468-4627
Contact:	Thomas Mackie, County Board Chair

- C. The application must show that the applicant is an organization, a telecommunications utility, or a city, village, town, or county that has established a legal partnership or joint venture arrangement with an otherwise qualified organization or telecommunications utility, and as such meets the eligibility requirements set forth in Wis. Stat. § 196.504(1).

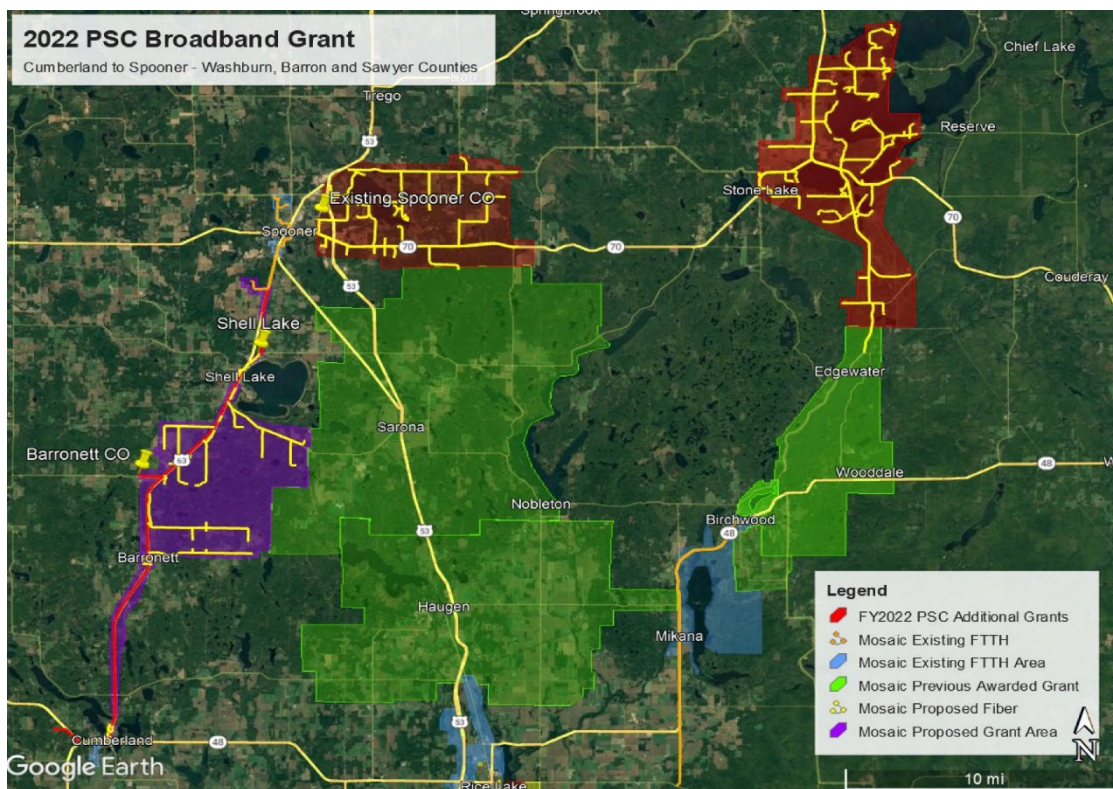
CTC Telcom, Inc. dba Mosaic Technologies is an alternative telecommunications utility certified as an ETC (SAC 339001) by the Public Service Commission of Wisconsin (PSCW) to provide service as an Alternative Telecommunications Utility (ATU) in Docket 1455-NC-100.

CTC Telcom, Inc. dba Mosaic Technologies (PSCW Utility #1455) provides service to the Rice Lake, Barron, Chetek, Turtle Lake, Birchwood, and Cumberland exchanges.

Barron and Washburn Counties understand and support the expansion of fiber-based broadband services. Although portions of the communities in their counties are reporting as served, they recognize that without FTTP internet capabilities, commercial and residential growth is limited and will ebb as consumer demands increase in the future.

### 3.2.2 Description of the project

- a. A static map and description of the area of the state that will be affected by the proposed project.



Mosaic proposes the first phase of a comprehensive FTTP design to provide high speed broadband access to the residents and businesses in the Towns of Cumberland, Barronett, Shell Lake and Spooner in the counties of Washburn and Barron Counties. This project allows Mosaic to connect an initial 259 business and 275 residential customers with FTTP 10Gbps broadband. It will also allow a phase two grant application to reach additional residential and business customers in these markets. Mosaic has trunk fiber adjoining the project area. Utilizing the scalability of Mosaic’s existing infrastructure will bring high speed broadband to unserved and underserved homes and businesses in a cost-effective manner.

- b. If the project area lies within a census block designated as served on the PSC Broadband Map, provide additional documentation to demonstrate the actual broadband service that is available in the proposed project area.

This project includes census blocks the PSC Broadband Map, as viewed on March 15, 2022, shows as served. Discrepancies exist with the mapping data. The map shows CenturyLink incumbent landline and T-Mobile terrestrial wireless internet as the carriers causing the “served” designation.

T-Mobile claims availability of 25/3 Mbps broadband which no one was able to collaborate. CenturyLink’s 477 data would suggest a combination of 40/3 and 20/1 Mbps internet available. No residents in the area could verify either carrier offered these speeds. In the case of T-Mobile, altitudes, trees and distance from towers were the issues. For CenturyLink no subscriber in the project area suggested an available speed anywhere near what was advertised.

Charter Spectrum claims some areas at 940Mbps and has not been confirmed by the local customers. Both Barron and Washburn Counties request and desire fiber based broadband services to spur business growth and attract new businesses to their communities. LTD Broadband, Inc. received an RDOF award in several census blocks in the project area. However, it is doubtful they will demonstrate the technical, financial or operational wherewithal to complete any builds in this area by the

end of 2024. LTD, for its part, has defaulted in several of its award states, and even if it achieves final FCC clearance, is likely to miss buildout milestones in Barron and Washburn Counties.

Starwire Technologies claims fiber-based connections along a small portion of Hwy D in the Shell Lake portions of the project area. It is uncertain if this reporting is accurate as Starwire has historically been a fixed wireless last mile provider and continue to advertise wireless antenna installations and based last mile connections on their website.

C. An explanation of how the proposed project will increase broadband access.

The proposed project increases broadband access as follows:

1. As illustrated on the Wisconsin Broadband map, viewed on March 15, 2022, current providers claim various broadband speeds in the project area. However, residents paint quite a different picture. None of the current bandwidth levels are reported by the businesses in these areas. Residents and businesses have not been told that the incumbent providers are improving their services.
2. Mosaic will provide FTTP high speed broadband and internet access to over 275 homes and 259 businesses whose broadband speeds are currently underperforming integrating these areas within its existing FTTP network. FTTP connections offer more reliable access to internet at speeds that are not possible on existing facilities. This will include the construction of drops to each premise as requested. **This project is scaled for additional expansion in the near future.**
3. Symmetrical broadband at 1 Gig speeds and higher essentially future-proofs deployments for residential and business needs well into the future as new applications emphasize larger data uploads. Mosaic's existing network infrastructure will easily handle these future demands.
4. In partnership with Washburn County and the Washburn County Economic Development, Mosaic commits to extending FTTP past 275 residential and 259 business premises in the proposed project areas.
5. As evident since COVID started March of 2020, telecommuting has become and remained a non-optional demand in the project area. Whether for work or online education, residents need to have the capability to reliably connect. Fiber internet is the solution to the current telecommuting debacles.
6. Provide access to telehealth, video, and imaging applications for diagnostic and health maintenance visits. This option enables early diagnosis and prevents unneeded travel at inopportune or dangerous times. With the pandemic, healthcare organizations are relying on telemedicine more than ever to reduce unnecessary contacts for vulnerable people. The Marshfield Clinic Health System, one of northwest Wisconsin largest health care providers and a financial supporter of other Mosaic grant applications, has completed over 240,000 telehealth encounters since March 2020. According to their CEO, "The COVID-19 pandemic accelerated the move to delivering care via telehealth." She also states, "Telehealth is not going away."
7. In its commitment to provide fiber broadband services to all customers, Mosaic Technologies has constructed over 1,200 miles of fiber spread among seventeen different projects since the beginning of 2017. This will continue in 2022 as the company directs construction funding toward unserved and underserved customers outside of its cooperative footprint. Mosaic's scalable FTTP network will not only meet the minimum 25/3 Mbps but will have the immediate capability of providing up to 10,000/10,000 Mbps.

Mosaic plans to offer broadband services at these prices to residential subscribers in the area. Mosaic's conscious decision to provide symmetrical offerings—that is, the same upload and downward bandwidth—is an important forward-looking move to facilitate new and anticipate needs for work from home, remote learning, and telemedicine applications:

25 Mbps Downward/10 Mbps Upward	\$59.95 per month
250 Mbps Downward / 250 Mbps Upward	\$79.95 per month
500 Mbps Downward / 500 Mbps Upward	\$94.95 per month
1,000 Mbps Downward / 1,000 Mbps Upward	\$109.95 per month
10,000 Mbps Downward / 10,000 Mbps Upward	ICB Pricing is available

- d. A statement whether the proposed project is targeting the “last mile,” “middle mile,” or backbone portion of the broadband infrastructure.

This is a last mile project with Mosaic self-funding business customer drop construction. The backbone transport route construction will benefit and allow future proof connections to Mosaic’s broadband network in both this phase as well as future phases. Mosaic will also construct two central office (CO) buildings with electronics and hardware to support the backbone and enhance the broadband experience in this region.

- e. A description of the broadband service to be provided, including estimated download and upload speeds, whether the speed is based on dedicated or shared bandwidth, and the technology that will be used. This description may be illustrated by a map or schematic diagram, as appropriate.

Mosaic will provide its broadband service exclusively using a FTTP network. This fiber network is an engineered extension of Mosaic’s existing robust FTTP fiber network and Calix electronics that integrates into Mosaic’s network. This platform is used in the other areas of Mosaic’s existing service territory. The same technologies will be used to provide the highest quality of service to all new customers served by this application.

The locations to be served will interface with Mosaic’s fiber backbone. Multiple 100Gbps Ciena backhaul terminals provide a diversely routed Internet and cable TV service. Fiber optic sizes will range from two fiber strands delivered to each house (aka fiber placed to the buildings or “drops”) to two hundred eighty-eight (288) fiber cable on the main line route.

In many projects of this type, drops are not placed to customers along the route unless there is a desperate need. This project includes drop installation to all residents in designated areas as requested during the construction of the project to maximize both cost efficiencies and fiber coverage.

This approach is supported by Mosaic and Washburn County matching 32.8% of the project cost.

All broadband electronics used to provide broadband services will be managed to the same standards as in Mosaic’s existing fiber enabled service territory.

- f. For middle mile projects:
- Identify last mile broadband service providers that will connect to the middle mile facility.
    - o If the participation of last mile providers is uncertain or cannot be disclosed publicly at the time of the application, describe the providers that could interconnect under appropriate circumstances.
    - o How long would it take for last mile connections to result?
  - Describe process for use of right-of-way (ROW) in collaboration with others digging or burying facilities (Dig Once program, etc.)

This is a last mile project. All broadband connections will be Mosaic subscribers.

- g. A schedule by which the applicant intends to complete the components of the proposed project. The project period is up to 24 months.

If the grant application for this project is approved in the early Summer of 2022, Mosaic will use the following deployment schedule, based on similar projects it has completed:

Fall-Winter 2022	Order and stage equipment and supplies
April-November 2023	Bury fiber distribution and feeder fiber
November 2023-February 2024	Install electronics at subscriber locations
January-Summer 2024	Turn up fiber-based customer services

While this is an aggressive timeline, Mosaic is confident the project can be completed. With excellent relationships with local construction companies as well as proactive supply chain management, this timeline will be met. The company recognizes how important an expedited project is to the residents of the proposed project area.

### 3.2.3 Itemized Budget (all amounts should be rounded to the nearest dollar)

- a. In addition to the Summary of Project Budget that is included as page 3, applicants should include a price list or quote for any equipment the applicant intends to purchase, including capital expenditures. The application should also indicate whether any facilities involved would be owned, rented, or leased.

Exhibit B – Construction Costs summarizes construction costs for the project. Engineering, some construction and some installation will be performed by Mosaic’s long-term third-party contractors under contract and under supervisory control of Mosaic

All network assets will be owned and managed by Mosaic.

- b. The application must show that the grant, if awarded, will not subsidize the expenses of a telecommunications provider or the monthly bills of telecommunications customers. For purposes of this grant program, subsidize means a contribution to the operating costs, including profit, of the telecommunications provider.

The grant funds requested in this Application will only be used for authorized purposes.

The applicant will not subsidize its ongoing expenses or the monthly bills of telecommunications customers. It is understood that for purposes of this grant program, subsidy means a contribution to the recurring service charges, operating costs, including profit, of the telecommunications provider.

- C. The application must show that the grant funds requested will be used for the sole purpose of constructing broadband infrastructure in the underserved areas covered by the application. Construction of broadband infrastructure may include any of the following:

Mosaic will use all grant funds requested for the sole purpose of constructing broadband infrastructure in the underserved area covered by our application. Construction of broadband infrastructure affirmatively will be limited to the following:

- a. Project planning that takes place during the performance period.
- b. Obtaining construction permits and Rights of Way.
- c. Construction of facilities, including construction of last mile infrastructure.
- d. Installation and testing of the broadband service.

Mosaic positively states that all grant funds requested in this Application will be used for the sole purpose of constructing broadband infrastructure in the underserved areas described in this Application.

#### 3.2.4 Priority factors supporting the application

- a. **Matching funds.** A description of the matching funds the applicant will invest in the proposed project, if any. For each element, indicate the type of match (cash, salary expense, or in-kind contribution). If the application is submitted by a partnership, identify the partner responsible for providing each element of the proposed matching funds. *Note: The requirement for this information is satisfied via inclusion of the completed Funding Statement as page 4 of the application.*

Recognizing the impact this project will have on the proposed project area, Mosaic and Washburn County pledges a 32.8% match to this project.

Matching funds are shown on page 4 of this application.

- b. **Public-private partnerships.** If the public-private partnership is memorialized in a joint venture agreement or other writing, provide a copy of that agreement. If the partnership has not been reduced to a written agreement, provide a short description of the management role, financial commitment, or other contribution to the project for each participating partner.
  - In scoring this element, information regarding active engagement of diverse communities in the planning, permitting, or marketing of the project will be given weight as well.
  -

Mosaic has entered into a Public-Private Partnerships with Washburn County and the Washburn County Economic Development Corp for this project. Please see Exhibit A for the partnership documents and Exhibit D for letters of support for this grant application. Washburn County has also passed Broadband Forward! and Telecommuter Forward!.

- C. **Existing broadband service.** A list of the broadband service providers, if any, currently serving the area the applicant proposes to serve. In scoring this element, the following factors will be taken into account:

- The degree to which the proposed project avoids duplicating existing broadband infrastructure.

Many areas are identified as served according to 477 and PSC mapping data. Mosaic along with Barron and Washburn Counties, as well as their respective Economic Development offices, seek fiber-based connections and services to future proof their area businesses and business expansions to attract more companies and jobs to these communities. To enable future expansion in the northern Barron and southern Washburn County areas with FTTP service, the backbone infrastructure to deliver these services must be in place. Mosaic has shown and will continue to show its commitment to getting these counties covered with a future proof FTTP network as quickly and efficiently as possible. The first step in this is getting transport to these areas.

- The application of a wireless broadband service provider proposing significant overlap with existing broadband service in addition to service to an unserved area will not be given priority consideration.

T-Mobile claims of 25/3 Mbps fixed wireless service but there appears to be little to no mobile wireless coverage in that project area. There doesn't appear to be any wireless infrastructure scheduled to become operational in the next year.

- Provide a list of all landline broadband service providers (DSL, cable, or fiber to the home) and fixed wireless broadband service providers that overlap the footprint of the proposed broadband project.

CenturyLink is using ADSL copper wire services within this area according to the FCC 477 reporting and bandwidth levels 15-40Mbps download and 0.5-3Mbps upload in the project area. Charter Spectrum is using coax technology claiming 1Gbps capable service within portions of the project area. No one was able to confirm such high-level bandwidth availability. T-Mobile is listed on the Wisconsin PSC Broadband map as a terrestrial fixed wireless provider offering service well below their advertised 25/3 Mbps speed.

- If known, provide an estimate of the customers within the proposed footprint that are served by competing landline and fixed wireless broadband service providers, and the download/upload speeds offered by those competing service providers.

Mosaic is not aware of any customers served by competing landline or fixed wireless broadband service providers, in the proposed project area.

- Provide a list of mobile wireless broadband service providers that overlap the footprint of the proposed project.

The Wisconsin Broadband Map lists AT&T Mobility, T-Mobile and Verizon Wireless each claim coverage in the application area, but the availability of reliable and reasonably priced internet connectivity is debatable. Other providers may advertise coverage, but there are no known subscribers to other providers' cellular services in the area.

- If known, provide an estimate of the customers within the proposed footprint that are served by competing mobile wireless broadband service providers, and the download/upload speeds offered by those competing service providers. (The presence of existing mobile wireless providers does not contribute to or affect the evaluation of existing broadband service in the project area for purposes of priority consideration but provides a more complete picture of the broadband options available to residents.)

Mosaic is not aware of any number of customer counts served by competing terrestrial or mobile wireless providers in the proposed project area.

- d. **Project impact.** A description of the geographic area and the population, both in terms of absolute numbers and likely users, which will be served by the proposed project. Indicate the number of anticipated residential and business customers in the project area, if known. Explain the speed and quality of internet service that will be available. Include information about the range of packages available for purchase. Provide details on any low-income access programs and steps the project will take to support adoption.

The geographic area served by this project covers approximate 52.9 miles of transport fiber between Cumberland and Spooner, reaching some 534 residential and business customers requesting fiber-based broadband to reassure their future and know they have a commitment for their businesses in the long run.

Businesses, in general, have struggled to stay open during COVID due to stay at home orders and shutdowns. However, even in “normal” times, area businesses struggle to meet the needs of potential customers due to unreliable broadband. Local residents unequivocally state that slow speed has resulted in the loss of personal and professional opportunities. Limited bandwidth will not allow remote learning, access to telemedicine, updates to agricultural databases or job application sites. This results in significant lost revenue to businesses and a potential loss of jobs.

From the response received from government officials, residents, and businesses along with the demonstrated lack of adequate broadband, Mosaic projects subscriber participation at close to 65% for customers within the first six months. Based on historical trends and demographics of the area, residential take rate is projected at around 75% or 206 homes and 194 businesses within the first twelve months.

Led by Mosaic’s Fiber to the Premise (FTTP) deployment, the area will benefit through:

- Broadband speeds up to 10 Gbps symmetrical to all current businesses and future residences demand, along with traditional IP-enabled voice services, and video. With customized drops to businesses, and fiber drops to every home, these speeds will cover all customers in the project area. The most economical package for residential service will be \$59.95. Section 3.2.2.c. displays all offered packages.
- Eligible residential Mosaic broadband subscribers will also receive Lifeline and ACP (Affordable Connectivity Program) credits on their monthly bills, assisted by our local staff.
- Government agencies and emergency services rely on broadband as part of providing its services. Buried fiber facilities offer the impeccable reliability especially during crisis situations and natural disasters when other facilities may be destroyed. Residents will have access to 24-hour telehealth services, as an alternative to driving on roads that may be impassable during some parts of the year
- Residents in the project area can have a 10-15 mile or more drive to the nearest hospital. With fiber connectivity, remote diagnostic medicine and health maintenance services, from pediatric to geriatric purposes, will be possible with simple laptop cameras and attached monitoring devices that are becoming commonly available. This brings the advanced care to the residents and eliminates unnecessary travel. The ongoing pandemic exposes the limited broadband as healthcare providers are encouraging patients not needing in-person care to remain at home to stem the transmission of COVID.
- Telecommuting: Like telehealth, telecommuting is becoming a norm. There are several seasonal residents who would either spend more time or move full time to the area. However, lack of reliable broadband makes telecommuting impossible. Comments attributed to this shortcoming include unreliable, underpowered, unstable, frustrating, completely useless. State and local government officials recognize that economic growth and stability of the region will hinge on telecommuting opportunities. This is completely dependent on upgrading inadequate broadband infrastructure through construction of fiber optic facilities.

**e. Scalability.** A description of how the proposed project could expand or improve the broadband service it delivers, while maintaining the quality of its broadband service. This description should include specific projected increases in the following parameters that are known at the time of the application:

- The number of users.
- The number of network nodes.
- The number of services provided.
- The geographic area served by the project.
- This description may also include a discussion of possible growth potential that is outside the commitment the applicant is making as part of its application.

This project is essential to the expansion of broadband services to residents and businesses in the unserved portions of northern Barron and southern Washburn counties. The scalability of this project cannot be overstated. There are many square miles of rural unserved areas that need fiber-based connectivity to survive long term, let alone thrive. Thousands of farms, homes, and lakeshore cabins are in these areas and are part of Mosaic’s future expansion plans funded through future grant rounds or other finance options.

Based on recently completed fiber projects, for this initial Mosaic projects adding approximately hundreds of residential and business customers within twenty-four months of project completion. Beyond symmetrical internet speeds, all customers will have access to a full range of voice services offered over a VoIP protocol along with video entertainment options delivered on both an IP platform as well as an over-the-top (OTT) option.

At the completion of this project, Mosaic will have run 52.9 miles of main line fiber for this project. As Mosaic continues to explore opportunities to fill in its network in underserved areas, this would be a potential growth area

- f. **Economic development.** A description of how the proposed project will promote job growth or retention, expand the property tax base, or improve the overall economic vitality of the municipality or region. This description may be supplemented with a letter from one or more persons discussing the potential economic impact the project could have for that individual or business. In scoring this element, the following factors will be taken into account:

- A discussion of potential economic impact the project could have for an individual business located in the project area.

Tourism, agriculture and small business are the primary employment areas for these areas. Mosaic's addition of fiber-based broadband services will allow residents to engage in hospitality services e-commerce, work-at-home, and education opportunities that are not available today. Fiber-based broadband will be an economic boon for these communities and surrounding residents and businesses.

- An explanation of how an improved download and upload transmission speed could better support a specific business in the project area.

Reliable FTTP broadband is not available along much of this Phase I fiber backbone route. Within the four towns along the route, Cumberland, Barronett, Shell Lake and Spooner, fiber connections do not exist, and available FTTP last mile connections are unavailable. Mosaic has positioned Barron and Washburn Counties for continued FTTP loop delivery where incumbent providers have not. Gigabit broadband is now seeing significant demand in small and large businesses who seek efficiencies and a competitive role in the expanding e-commerce world around them.

- An explanation of the likely impact improved broadband service could have on residential property values, supported by local sales data if available.

Recent studies by the Fiber Broadband Association have shown that home values increase by an average of 3.1% for homes with fiber-based broadband. With fiber availability, it is anticipated that the demand for the available building sites will increase causing growth in property values and the tax base. This and increased employment resulting from Gigabit broadband availability will spread these benefits throughout northwestern Wisconsin.

Across much of Northwest Wisconsin, the ability to sell homes today is strongly influenced by the presence of fast and reliable broadband service. Area real estate agents state that prospective home buyers rule out properties that do not have current access to high-speed broadband. Making this available to residents will boost property values, help retain residents, and provide the ability to work from home attracting a wider variety of people that are employed in that capacity.

- A demonstration of how improved broadband service to a residential portion of the project could benefit a telecommuting population.

The recent COVID-19 pandemic sped up a growing trend toward telecommuting, remote work and home-based businesses. Residents and businesses would benefit immediately from improved and high-speed broadband. Recent surveys suggest 25% of residents currently telecommute, have the option, or for personal reasons, need to. Extrapolating that to the great number of residential locations in this application would result in a significant boost in telecommuters. Arguably, that percentage could be higher with improved broadband access. These people benefit immediately from improved broadband, and the life options it provides. Mosaic Technologies has defined itself as a leading technology provider and is seeking to further expand its fiber services to unserved and underserved residential and business customers. Our fiber product line is a permanent solution to bridging the digital divide. This project demonstrates our commitment to unserved and underserved residents in our expanding service territory.

- g. Effect upon broadband service to adjacent areas.** A description of whether the proposed project will or will not impair the ability of a broadband service provider or competing broadband service provider to extend broadband service to areas adjacent to the proposed project area.

Mosaic's proposed project will not impair the ability of any broadband service provider to extend service to areas adjacent to the proposed project area. On the contrary, the availability of FTTP will serve as a catalyst for demand in the other underserved areas where the incumbent, or others, could overbuild with fiber.

### 3.2.5 Other information supporting the application

- a.** A description of applicant's history or experience constructing broadband communications facilities in the state and elsewhere.
- If applicable, an applicant must comment upon the status of all prior broadband expansion grant projects, including the type of broadband technology used, the facility route actually built or installed, the number of residential and business customers actually connected, and other relevant details of the prior project(s).

Mosaic Technologies has defined itself as a leading technology provider and is seeking to further expand its best-in-class fiber services to underserved residential and business customers. Mosaic's fiber product line is a permanent solution to bridging the digital divide. The below projects demonstrate our commitment to unserved and underserved residents in our expanding service territory.

**2017:** Mosaic completed a project in partnership with Indianhead Holsteins immediately North and West of the City of Barron. This project brought FTTP to thirteen unserved farms including a large family business that included a farming division, a renewable wood products division, and a live entertainment division which coordinates events for military troops deployed around the world. This was partially funded by a broadband expansion grant.

**2019:** Mosaic completed a FTTP project to nineteen homes North and West of the City of Rice Lake. These residences, located in an underserved area of a large incumbent carrier, now have access to 1Gbps symmetrical service along with voice and video entertainment services. This project was also awarded a broadband expansion grant.

**2020:** Phase 2 of the 2017 project extended five miles of fiber to reach eighteen residences along Highway T outside of the City of Barron. Those receiving fiber broadband included several residents who work from home in "on-call" positions including one in health services and the other an IT director for a local school district. Mosaic also received several positive comments related to providing fiber at such a critical time as COVID. This project was partially funded by a broadband expansion grant.

**2020:** Mosaic bridged the digital divide for thirty-seven customers, including eight businesses. These customers are located on a four-mile stretch of County Highway SS North of Rice Lake. While close to city amenities, they had inadequate services from a large incumbent carrier. Now they have access to fiber-based services with up to 1Gbps speeds. Wisconsin PSC awarded a broadband grant for this project.

**2020:** Mosaic, with assistance from CARES Act funding through the Wisconsin PSC, constructed fiber past 188 homes along the Western shores of both Upper and Lower Turtle Lakes. This project was originally submitted for broadband grant consideration as part of the 2020 grant cycle and was part of a larger fiber project that included the Village of Turtle Lake. This project was not funded in that cycle.

**2021:** In March of 2021 Mosaic was awarded three PSC broadband expansion grants; Towns of Cedar Lake, Sand Creek, and Prairie Farm. Mosaic constructed fiber to approximately 1,215 homes and businesses around Red Cedar Lake (Town of Cedar Lake) in northeast Barron County and the Village of Birchwood in southeast Washburn County. All fiber construction was completed by the first quarter of 2022 for the Red Cedar project and all customers now have access to fiber services. Final grant documents were submitted in the first quarter of 2022.

Additionally, Mosaic constructed fiber past 1,453 homes and businesses in the Towns of Sand Creek and Otter Creek and the Towns of Prairie Farm and New Haven in southern Barron County and northern Dunn County. This project was also completed in late 2021. Final inspections are taking place and closeout is expected to be completed by the second quarter of 2022.

These three projects provide robust and reliable best-in-class fiber services to these communities. The successful completion of these projects demonstrates Mosaic's capability in expanding their fiber network to the residents and businesses located in their surrounding communities.

- An applicant must also comment on broadband construction projects undertaken in prior years that were not funded in part by the Broadband Expansion Grant program.

Starting in 2017, Mosaic Technologies, embarked on a multiyear initiative to overbuild fiber in the areas of its six-exchange incumbent territory being served with copper. Since inception, the cooperative has plowed over 1,100 miles of fiber. As of today, the entire cooperative service areas is 100% FTTH. This project was funded, in part, through loans from the Rural Utilities Service (RUS), a division of the United States Department of Agriculture.

Over the past four years, Mosaic has self-funded multiple smaller projects outside its incumbent territory. In the cities of Barron, Chetek, and Rice Lake, Mosaic enhanced its rich copper network by vectoring its VDSL platform, bringing speeds up to 150/25 Mbps to residents in those areas. While this copper strategy serves as a technology improvement, the long-term solution is fiber. Starting in 2021, Mosaic has invested in fiber where current copper facilities exist in its competitive footprint to future proof its network.

Additional Mosaic Technologies self-funded fiber projects include:

- Turtle Lake – As mentioned previously Mosaic submitted a 2020 grant request for Turtle Lake. While this grant was not funded, Mosaic remained committed to bringing fiber to these underserved residents and businesses. During the spring and summer of 2020, fiber construction passed over 300 homes in the Village.
- Rice Lake – Starting in 2021, Mosaic began a multi-year initiative to replace copper facilities with fiber services to approximately 3,723 residents and businesses. To date we have completed FTTP to 473 locations.
- Chetek – Also starting in 2021, Mosaic began a 2-year initiative to replace copper facilities and construct new greenfield. To date we have successfully completed the replacement of all copper with fiber to 1,200 locations and have constructed greenfield fiber service to 350 new locations. This project is schedule to be completed in May of 2022.

All of these projects represent Mosaic's ongoing commitment to bring best-in-class fiber services to rural Northwest Wisconsin. Exhibit D provides a history of Chibardun Telephone Cooperative, Inc. / CTC Telcom, Inc. DBA Mosaic Technologies

- b. A description of how the proposed project will or will not duplicate existing broadband infrastructure.

Mosaic is not duplicating any likely expansion by CenturyLink in the proposed project area. Letters of support received by Mosaic regularly state that broadband speeds do not reach advertised levels. Cellular internet services are uneconomical and often unavailable in homes. No incumbent provider infrastructure improvements are currently promised nor anticipated.

- c. A description of an applicant's financial ability to undertake the proposed broadband construction project. This may include information such as the number of years the company has been in operation, documentation of successful completion of similar infrastructure projects, evidence that sufficient funds are available to cover project expenditure and match, customer turn-over rates, and credit rating.

Mosaic Technologies invests over \$3,000,000 each year in capital improvement projects through self-funding from operating income and EBITDA. The required time, resources, and provisional matching funds for this project have been factored into the Cooperative's 2022-2024 capital spending plan.

Mosaic provides a record of its historical and current projects in Exhibit C below, reviewing its long and successful ability to manage and operate large construction projects.

Each year, Mosaic files its PSCW Annual Questionnaire fully describing regulated and non-regulated revenues.

- d. For middle mile projects, state the terms under which the applicant will make its middle mile fiber resource available to last mile providers. Without disclosing project-specific or customer-specific negotiated rates for service or access, state whether access to the middle mile fiber resource will be offered to last mile providers at a rate that is reasonable and common to the industry. Describe any restrictions or limits that may limit the availability or interconnection with the middle mile route.

This is not a middle mile project. While there is backbone investment with this project, there is no wholesale reselling to other providers. All residents and businesses connected to this network will be Mosaic customers.

- e. For middle mile routes, state the amount of fiber capacity, by number of fiber strands in a cable, that the applicant has been reserved for public use. Describe any commitment or tentative discussion indicating the local government or State agency that might use those fiber strands, and for what purpose. Describe any restrictions or limits that may limit the public use (e.g., a possible use conflicts with an existing program covering the same subject matter).

This is not a middle mile project. All customers on these broadband connections will be Mosaic customers. No fiber or connections will be customers of any other provider.

- f. A description of how the proposed project will affect the ability of individuals to access health care service from home, including any impact upon the costs of those services.
  - Specific information from a hospital or clinic in the project area that currently uses or intends to use home-based telemedicine equipment to enhance access health care service would best illustrate this point.

The rising cost of healthcare, downward pressure on reimbursement to providers, and a lack of physician availability in rural areas, has caused a significant shift in the delivery of healthcare to rural residents. No longer is there a hospital or clinic in every town. Health systems have had to make the difficult choice to close the local facility in favor of larger regional health facilities. This creates a significant divide in critical healthcare access for residents in rural areas. With the advent of telehealth, the physician can return to making “house calls” by providing remote diagnostic and health maintenance services to a wide spectrum of patients. COVID-19 has “accelerated the move to delivering care via telehealth” according to Susan Turney, CEO of Marshfield Clinic Health System (MCHS). MCHS has seen its telehealth encounters explode to over 240,000 since March of 2020, when measurement began in earnest.

Telehealth is possible with an affordable computer with camera, attached monitoring devices, AND high-speed broadband. Mosaic’s deployment of fiber infrastructure provides the virtual highway to connect patients with their doctors. The time and cost of traveling to a regional provider will no longer be a limiting factor for those seeking advanced care.

Even cellular 911 service will function dependably from the home as FTTP broadband allows reliable WIFI services to modern cell phones.

- g. A description of how the proposed project will affect the ability of students to access educational opportunities from home.
  - Specific information on the likely number of students that will benefit from improved access to educational opportunities from home would be useful.
  - Specific information regarding educational programs that are currently available for students in the project area would be useful.

Whether it be the primary and secondary students in the local school districts or adults pursuing degrees in higher education, having access to the digital world for class resources is mandatory. Nearby schools use Chromebooks or iPads for online education which are practically useless without reliable broadband at home. Students without adequate broadband are at a significant disadvantage. With fiber broadband, all those seeking education would have access to online vocational and college level courses from limitless colleges and universities including the extensive University of Wisconsin online system. In this economically challenged area where many households are well below the average household income, fiber broadband can eliminate barriers to the educational resources’ students need to succeed.

- h. A description of actions taken by a city, village, town, or county in support of the grant application that have not been discussed in the context of a public-private partnership above, including but not limited to:
  - The contribution of funds, easements or permissions to use publicly-owned real estate, construction materials, or other items of value to the grant project.
  - The contribution of in-kind assistance to the grant project in the form of waived fees and expenses for obtaining use permits and permissions.
  - The contribution of other items of benefit to the grant project, such as public outreach and education, vehicles, water, etc.
  - Certification as a Broadband Forward! Community or Telecommuter Forward! Community.

Washburn County and Washburn County Economic Development have a Public Private Partnership with Mosaic Technologies.

- The contribution of other items of benefit to the grant project, such as public outreach and education, vehicles, water, etc.

Washburn County and Washburn County Economic Development will assist in the promotion, outreach, and education for residents of the project area. Both associations have already demonstrated enthusiastic support throughout the grant application process.

- Certification as a Broadband Forward! Community or Telecommuter Forward! Community.

Washburn County is a staunch supporter of technology infrastructure improvements in their jurisdictions and, as such is certified as Telecommuter Forward! and Broadband Forward!.

- i. Letters and messages in support of the application submitted by prospective customers, local government officials, and other interested persons.

Local government officials, Washburn County Economic Development, Northwest Regional Planning, White Construction, and the Wisconsin State Telecommunications Association (WSTA) are staunch supporters of technology infrastructure improvements in this area and their support documents have been included in this application under Exhibit E. We have also included letters and speed tests from residents and business owners in the area who support this application.

- j. Any other equitable factor that the applicant desires to discuss, including one or more of the factors in Wis. Stat. § 196.03(6) that the applicant believes its project would advance.

Mosaic Technologies has long been a respected community partner in its serving area. We embody the ideals of hard-working Northern Wisconsin residents. This includes positively impacting the quality of life for our community members and promoting initiatives that advance the area and its residents. Most notably is Mosaic's commitment to expanding fiber broadband throughout Northwestern Wisconsin. That ties directly to our business operations mission. Beyond that, Mosaic has been a community partner by offering its facilities, staff, and assets to support the public good. Examples include:

1. Free use of its meeting facilities by many area schools, local non-profit and government agencies providing 1 Gbps internet, video technology, and technical support. Specifically, Red Cross Blood Drives, Barron County Office on Aging seminars, student learning, and OSHA safety training workshops.
2. Disaster recovery headquarters. When a natural disaster hit residents in Mosaic's territory, we opened our building to the displaced residents, collected food, clothing, and household items for those residents and provided space for Barron County Emergency management to run its central operations for nine days.
3. Support of local events. When lack of support for Cameron's annual community festival threatened to cancel the events, Mosaic employees organized events, coordinated volunteers, and operated many activities to keep the festival alive and promote civic engagement.

Mosaic's mission is to provide advanced technology solutions for an affordable price. With Barron and Washburn Counties being in economically challenged area in the state, we are sensitive to the balance of charging enough to keep the company profitable while also respecting the limited resources of our customers. We understand the importance of universal service for the rural communities we serve as we are a beneficiary of universal support recovery in our regulated territory. Section 3.2.5.a of this application enumerates several examples of how Mosaic invests heavily into the technology infrastructure to promote economic development and provide services to diverse populations in our geographic serving area. Beyond that, we provide the personal element not readily available in more urban settings.

In discussing this element, the following information may be useful:

- Technical support and training materials that the applicant intends to provide.
- Information that the applicant intends to use to promote better broadband adoption and use.
- A description of a program or outreach to provide assistance to individuals of low income.

Mosaic Technologies offers 24/7 customer support through our Network Operations Center and contracted after hours support center. We are generous with our time and attention to making sure our customers are prepared when using our services.

Working through schools and community organizations, Mosaic promotes the use of broadband by educating community members on the advantages as well as the pitfalls of technology. Mosaic was the first small telco to receive Level 2 certification from the cybersecurity experts at Dynetics, Inc. and internally we have adopted stringent protocols on data security and prevention of cyber hacking and offer that as a service to our customers.

During the COVID pandemic, Mosaic created free, public use WIFI hotspots at each of its office locations in Barron, Cameron, Chetek, and Rice Lake to provide access to local residents who lost access when other public sources such as schools and libraries closed. We also partnered with the local schools to provide free internet to low-income students with no broadband access. Mosaic acts as a partner to our community, not just the big internet pipe to the world.

## **Exhibits**

**Exhibit A –Partnerships and Telecommuter Forward Ordinances**

**Exhibit B – Construction Costs**

**Exhibit C – History of Chibardun Telephone Cooperative/CTC Telcom dba Mosaic Technologies**

**Exhibit D – Letters in Support of this Application**

**Exhibit A**  
**Public-Private Partnerships**

**APPLICATION PARTNERSHIP AGREEMENT**

**Page 1 of 2**

**Public Private Partnership Agreement**

**A Resolution by and between the Washburn County Economic Development Corporation representing Washburn County Area, and CTC Telcom Inc., dba Mosaic Technologies**

**THIS AGREEMENT** (the "Agreement") are made this 14<sup>th</sup> day of March, 2022 by and among the Participating Parties (defined below) located in the State of Wisconsin (the "State") which, through their duly authorized representatives, have signed this Agreement.

**WHEREAS**, The Washburn County Economic Development Corporation representing the Washburn County area resolves, to help provide access to resources and the support structure necessary for economic development within its boundaries, to share resources, extend educational opportunities to all, and,

**WHEREAS**, CTC Telcom Inc., dba Mosaic Technologies, a Wisconsin company doing business in Wisconsin, proposes to expand broadband capability to reach un-served or underserved residences and businesses within Washburn County where such service is currently unavailable or is prohibitively expensive; and

**WHEREAS**, high speed internet access is critical infrastructure for the health, safety and quality of life for community residents along with a key infrastructure development crucial to continued governmental and business development; and,

**WHEREAS**, CTC Telcom has applied for a Wisconsin Broadband Expansion Grant through the Public Service Commission of Wisconsin to expand access to broadband services in Washburn County, specifically to areas benefitting Washburn County's areas; and

**WHEREAS**, to further support its application for a Wisconsin Broadband Expansion Grant, the Washburn County Economic Development Corporation, contingent upon an award to CTC Telcom, enters into an Agreement, referred to as a Public Private Partnership Agreement, to assist in this Project by:

Providing in-kind assistance to CTC Telcom to assist in the construction of fiber facilities, contingent upon CTC Telcom being awarded full funding requested in its FY2022 Round of State of Wisconsin Broadband Expansion Grant Program application ("Project");

Providing in-kind assistance to the Project in the form of contact with county and local municipal government to waive fees and expenses for obtaining permits or permissions required to implement this Project;

Assisting in processes resulting in permissions on and across Washburn County, to engage in activities to construct the Project in compliance with all existing Tribal rules and regulations;

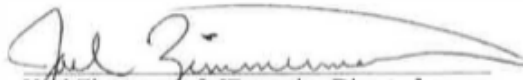
Providing Community education and outreach regarding the expansion of broadband access to residences and businesses within the scope of the Project; and

Recognizing that the Project is a priority and is consistent with any internal planning documents adopted by the Washburn County Economic Development Corporation.


NOW, THEREFORE, it is hereby agreed by and among the Parties as follows:

1. Records. CTC Telcom will maintain and be the custodian of all records associated with the administering and performance of this Agreement, and will make those records available upon request.
2. Reporting. The Parties shall meet on a semi-annual basis for the purpose of presenting an oral report on the status of the Project. The date, time and place of such meeting shall be determined cooperatively among the parties.
3. Effective Date. This Agreement shall become effective upon its adoption and shall remain in full force and effect until terminated as provided herein.
4. New Members. After the effective date of this Agreement, additional municipalities may join in this Agreement.
5. Termination. This Agreement shall be deemed terminated by any party upon thirty (30) days written notice requesting termination of this Agreement in whole or in part.
6. Severability. The terms of this Agreement are severable and any determination by any court or agency having jurisdiction over the subject matter of this Agreement that results in the invalidity of any part shall not affect the remainder of the Agreement.
7. Amendments. The terms of this Agreement shall not be amended without the written authorization of the governing bodies of all Participating Parties.
8. Governing Law. This Agreement shall be governed by the laws of the State of Wisconsin.
9. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

( person representing interests of Washburn County Economic Development Corporation)

By:   
[Joel Zimmerman], [Executive Director]

CTC Telcom, Inc. dba Mosaic Technologies a Participating Party

By:   
Domenico Fornaro, CEO  
Dated: March 14, 2022

## Exhibit B Construction Costs

### FY22 Broadband Expansion Grant Application Budget & Income Summary



Please complete this form using Microsoft Excel. A PDF copy must be attached to your application as page four. In addition, this form must also be uploaded to ERF in Excel format.

#### Grant Summary

<b>Grant Applicant:</b>	<b>Project:</b>
CTC Telcom, Inc. dba Mosaic Technologies	Cumberland to Spooner Highway 63

#### Budget

Line:	Description / Category:	Grant Funds:	Match:	Total:
1	Contractual, Consultant Fees	\$ 1,946,253.00	\$ 1,312,500.00	\$ 3,258,753.00
2	Equipment	\$ 422,188.00	\$ -	\$ 422,188.00
3	Supplies			\$ -
4	Labor (Salary, Fringe)	\$ 317,036.00	\$ -	\$ 317,036.00
5	Permitting, Licensing Fees			\$ -
6	Travel			\$ -
7	Other			\$ -
<b>Total:</b>		<b>\$ 2,685,477.00</b>	<b>\$ 1,312,500.00</b>	<b>\$ 3,997,977.00</b>
				32.8% match requested

#### Pledged Contributions

#:	Entity:	Entity Type:	Pledge Type:	Pledge:
1	Mosaic Technologies	Applicant	Cash	\$ 1,300,000.00
2	Washburn County	Partner	Cash	\$ 12,500.00
3				
4				
5				
6				
7				
8				
9				
10				
<b>Total:</b>				<b>\$ 1,312,500.00</b>

<u>Cumberland to Spooner - Barronett Area</u>			
Construction =	\$	3,227,066	
Buildings =	\$	-	
Drop construction =	\$	31,688	
Pre-construction coordination and drops =	\$	-	
Electronics CO Equipment =	\$	422,188	
Splicing =	\$	317,036	
Design =	\$	-	
Inspection, project management, records =	\$	-	
<b>TOTAL =</b>	<b>\$</b>	<b>3,997,977</b>	
<u>Electronics Breakdown purchased by Mosaic</u>			
Clearfield Field Splitter Cabinets =	\$	100,000	
Transport Optics and Routers =	\$	220,000	
Calix E7 series XGS-PON electronic terminals =	\$	70,500	
ONTs/CPE devices =	\$	31,688	
	\$	422,188	

## Exhibit C

### History of Chibardun Telephone Cooperative/CTC Telcom DBA Mosaic Technologies

Chibardun Telephone Cooperative formed as a cooperative in 1957. Prior to that, individual communities within the current incumbent footprint had their own municipal telephone operation. With changing technology and need for investment, community leaders decided to join forces to form one larger cooperative. The name Chibardun came from the three counties where the founders were located: Chippewa, Barron, and Dunn Counties (CHI-BAR-DUN).

Chibardun has always been considered a leader and key business in Barron County. We are very active in the communities we serve by participating in local events, supporting schools, providing scholarships to students, and donating money and in-kind contributions to local civic groups.

Chibardun is a premier provider of high-speed internet, video, and voice services, but also offers professional managed IT solutions, commercial telephone systems, and wiring installation services to businesses in Northwest Wisconsin.

Chibardun has always been on the leading edge of business ventures and service offerings. Some notable accomplishments include:

The introduction of both paging services and cable television in the mid-1980s, and the introduction of broadband internet in the mid-1990s.

**Late 1990s:** Chibardun formed a competitive company, CTC Telcom, Inc., and invested into the nearby communities of Barron, Chetek, and Rice Lake.

**Early 2000s:** Fixed mobile wireless Internet service through a 700Mhz licensed spectrum investment was offered.

**2009:** To more accurately reflect the broad spectrum of services that were offered, Chibardun adopted the Doing Business As (DBA) name of Mosaic Telecom. Branded as Mosaic Mobile, the company operated its own cellular network/cell phone service. Recognizing the economic challenges of providing the latest technology in an ever-changing cellular industry, Mosaic exited all wireless operations in early 2016.

**2016:** Management made the pledge to fully fiber the incumbent territories still using copper facilities as well as develop a long-range plan of expanding our fiber footprint in Northwest Wisconsin. With financial support from the Rural Utilities Service (RUS), a division of the United States Department of Agriculture, Chibardun began expanding its fiber facilities in early 2017. To date, Chibardun's entire incumbent territory is 100% FTTH. In recognition of its efforts, Chibardun was recognized by the National Telecommunications Cooperative Association (NTCA) with the Smart Rural Community award for its advancement of technology in its serving area.

**2017- Present:** Beyond the pledge to fully fiber the incumbent territories, Mosaic has dedicated significant resources to logical expansion of its fiber footprint to include competitive areas where the incumbent carrier has failed to improve its infrastructure. Mosaic has completed nine grant aided projects, with five in progress, along with self-funding multiple other projects to improve the fiber infrastructure to our region.

**2020:** Mosaic Telecom rebranded to Mosaic Technologies to reflect the vision of the company and its product offerings more accurately. Mosaic continues to grow and look for opportunities to bring broadband to rural, underserved areas. Being a small company, we understand the need to act as good stewards of our resources to maximize the positive impact to our communities.

**2021:** In March of 2021 Mosaic was awarded three PSC broadband expansion grants; Towns of Cedar Lake, Sand Creek, and Prairie Farm. Mosaic constructed fiber to approximately 1,215 homes and businesses around Red Cedar Lake (Town of Cedar Lake) in northeast Barron County and the Village of Birchwood in southeast Washburn County. All fiber construction was completed by the first quarter of 2022 for the Red Cedar project and all customers now have access to fiber services. Final grant documents were submitted in the first quarter of 2022.

Additionally, Mosaic constructed fiber past 1,453 homes and businesses in the Towns of Sand Creek and Otter Creek and the Towns of Prairie Farm and New Haven in southern Barron County and northern Dunn County. This project was also completed in late 2021. Final inspections are taking place and closeout is expected to be completed by the second quarter of 2022.

These three projects provide robust and reliable best-in-class fiber services to these communities. The successful completion of these projects demonstrates Mosaic's capability in expanding their fiber network to the residents and businesses located in their surrounding communities.

Starting in 2017, Mosaic Technologies, embarked on a multiyear initiative to overbuild fiber in the areas of its six-exchange incumbent territory being served with copper. Since inception, the cooperative has plowed over 1,100 miles of fiber. As of today, the entire cooperative service areas is 100% FTTH. This project was funded, in part, through loans from the Rural Utilities Service (RUS), a division of the United States Department of Agriculture.

Over the past four years, Mosaic has self-funded multiple smaller projects outside its incumbent territory. In the cities of Barron, Chetek, and Rice Lake, Mosaic enhanced its rich copper network by vectoring its VDSL platform, bringing speeds up to 150/25 Mbps to residents in those areas. While this copper strategy serves as a technology improvement, the long-term solution is fiber. Starting in 2021, Mosaic has invested in fiber where current copper facilities exist in its competitive footprint to future proof its network.

Additional Mosaic Technologies self-funded fiber projects include:

- Turtle Lake – As mentioned previously Mosaic submitted a 2020 grant request for Turtle Lake. While this grant was not funded, Mosaic remained committed to bringing fiber to these underserved residents and businesses. During the spring and summer of 2020, fiber construction passed over 300 homes in the Village.
- Rice Lake – Starting in 2021, Mosaic began a multi-year initiative to replace copper facilities with fiber services to approximately 3,723 residents and businesses. To date we have completed FTTP to 473 locations.
- Chetek – Also starting in 2021, Mosaic began a 2-year initiative to replace copper facilities and construct new greenfield. To date we have successfully completed the replacement of all copper with fiber to 1,200 locations and have constructed greenfield fiber service to 350 new locations. This project is schedule to be completed in May of 2022.

All of these projects represent Mosaic's ongoing commitment to bring best-in-class fiber services to rural Northwest Wisconsin.


## Exhibit D


### Letters in Support of Application

**From:** Nick Ricci <[nickricci2760@yahoo.com](mailto:nickricci2760@yahoo.com)>  
**Sent:** Friday, March 11, 2022 7:15:30 PM  
**To:** Jenifer L. Mason <[jmason@experiencemosaic.com](mailto:jmason@experiencemosaic.com)>  
**Subject:** Re: Supporting Letter and Speed Test - Fiber to the Home | Mosaic Technologies

Dear Jenifer, thanks for the phone call. It was almost a year ago that I approached you at your booth to see if Mosaic could meet my internet needs. I am even more frustrated with CenturyLink now than I was then. My internet speed was 1.5 m when my contract was being renewed and they offered me high speed internet for free. I turned it down because my son was playing too many video games. Recently I have called them 4 times to upgrade to 10 m. Twice I was promised they would do it for free and then tried to entice me to sign an offer about 70 dollars a month more. Two more times they just lied to me. I finally agreed to pay 16 dollars more a month for high speed internet and when the bill came it was 30 dollars more. My contract with CenturyLink ends May 13, 2022. Between now and then I will do everything I can to find anybody else to meet my needs. I have had the higher speed for about two weeks. Sometimes it works and sometimes it doesn't. It just shuts down whenever it feels like it. If you could get fiber here I would sign up instantly. The local service men from CenturyLink have been great but the company is arrogant, rude and condescending. Sometimes they are not. Sometimes. I am spending too much for poor service. I will change providers somehow. Nick.

PSC Grant

 [codydesignshoppe@gmail.com](mailto:codydesignshoppe@gmail.com)  
 To: IWANTFIBER

 Follow up. Completed on Wednesday, March 16, 2022.

I support the fiber expansion into Shell Lake.



 SPEEDTEST

 PING

11

ms

 DOWNLOAD

47.3

Mbps

 JITTER

5

ms

 UPLOAD

10.7

Mbps



 Spectrum

Eau Claire, WI

 Download our free Speedtest app for desktop.

 COPY LINK



Spectrum  
68.117.38.245



Spectrum  
Eau Claire, WI



Thank you,  
 Cody A. Pearson  
 Home Designer  
 Shell Lake, WI  
 (715)939-0165  
[codydesignshoppe@gmail.com](mailto:codydesignshoppe@gmail.com)





February 16, 2022

Rebecca Cameron Valcq  
Public Service Commission of Wisconsin  
Hills Farms State Office Building  
4822 Madison Yards Way  
North Tower – 6<sup>th</sup> Floor  
Madison, WI 53705

Re: Mosaic Technologies Broadband Expansion Grant Program Application (Spoonerville Area -  
Washburn County)

Chair Valcq:

On behalf of Northwest Regional Planning Commission, I am pleased to support a proposed PSC Broadband Expansion Grant Program application being submitted by Mosaic Technologies for a portion of Washburn County. The area proposed in the grant application needs fiber-to-the-premise broadband connectivity as the area has unserved and underserved households and businesses.

The area proposed for the broadband expansion will enable businesses and residents opportunities to access a fiber-based network that meets the technology of today and the future. Rural areas in the county(s) lack fiber infrastructure enabling families to adequately access remote learning experiences necessary for K-12 students and adults seeking to advance their education or job training opportunities. Businesses can take advantage of the proposed fiber infrastructure to expand their markets nationally and globally and have access to advanced fiber capabilities that will allow them to be more competitively positioned in the technology-based world we live. During the COVID-19 Pandemic, telehealth services were critical for patient/doctor visits as access to clinics and hospitals was limited. Areas where broadband service is non-existent or insufficient to connect to medical facilities meant residents were delayed in receiving needed checkups. The proposed project will greatly enhance the health of area residents as telehealth becomes more routine for patient doctor interaction.

The investment proposed by Mosaic Technologies and an award of funds by the PSC will provide a significant economic benefit to residents and businesses! Please do not hesitate to contact me at [sjohnson@nwrpc.com](mailto:sjohnson@nwrpc.com) if you have any questions.

Sincerely,

Sheldon Johnson  
Executive Director



WASHBURN COUNTY ECONOMIC DEVELOPMENT CORPORATION  
208 Vine Street  
Spooner, WI 54801  
Phone: (715) 635-8242 | [joelz@washburncountyedc.org](mailto:joelz@washburncountyedc.org)

March 9, 2022

RE: Mosaic Technologies – PSC Grant Application with Washburn County

To Whom It May Concern,

I am pleased to support the Wisconsin Public Service Commission's (PSC) application of Mosaic Technologies for broadband connection in Washburn County. This project will deploy broadband fiber throughout Central Washburn County, an area that is significantly underserved and/or unserved and is the fastest growing portion of our County.

As Executive Director of Washburn County Economic Development, I continue to advocate for infrastructure improvements including broadband projects, as it is vital to the growth and success of the region's economy. With adequate broadband fiber, businesses within the region can increase productivity and expand their offerings and market scale. The COVID-19 health crisis has presented challenges to the region, with significant challenges to small businesses and the tourism sector. Investments through the Business Broadband Connection project will provide a needed tool to help southern Washburn County retain and attract businesses and begin economic recovery efforts. In addition, our growing population over the past year has come from those migrating out of urban areas. They already demand a higher speed to function in their daily work lives, as well as their children's educational settings. Our students continue to fall behind the curve as they head to post-secondary education because of their inability to obtain a stable, reliable, affordable, and fast enough internet connection. Our aging population found it difficult to connect to telehealth opportunities last 2 years as a result of Covid, putting themselves at greater risk. Often overlooked was the ability for families to virtually see their elderly family members during the isolative time. This takes a toll on those in our communities that we, as humans, have been conditioned to care for our elders.

I have been in this position for 6 years and have worked with every provider imaginable to make something happen in Washburn County. Mosaic is preferred over other providers. They stepped up and took the reins on leading us out of the previous millennium of technology into the future.

Washburn County recognizes the importance of broadband access to all areas of the economy and personal lives. The County is Broadband Forward! Certified, meaning it is supportive of increase broadband efforts and will take steps necessary to reduce hurdles for deployment. As such, the County is enthusiastic about the proposed project and excited to have Mosaic Technologies and PSC as partners for this project. This investment through awarding of this PSC grant is of significant economic benefit to the businesses and communities in the region.

Please do not hesitate to contact me at 715-635-8242 with any questions or by email at [joelz@washburncountyedc.org](mailto:joelz@washburncountyedc.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Zimmerman".

Joel Zimmerman  
Executive Director WCEDC

## Wisconsin State Telecommunications Association



President  
TIM KUSILEK  
President Elect  
JUSTIN HUEBNER  
Executive Director  
BILLESBECK

March 16, 2022

Chairperson Rebecca Valcq  
Public Service Commission of Wisconsin  
4822 Madison Yards Way  
North Tower - 6th Floor  
Madison, Wisconsin 53705-9100

Chairperson Valcq,

I am pleased to support the FY2022 Broadband Expansion Grant Program (BEGP) application of Mosaic Technologies (Mosaic) between Cumberland and Spooner.

For more than 60 years, Mosaic has been a leader in the rural telecommunications industry. They offer quality telecommunications products and services, including high speed internet, video entertainment, and local and long-distance telephone.

The proposed expansion between Cumberland and Spooner will install 26.6 miles of fiber, bringing future-proof fiber broadband to 129 homes and 159 businesses. The cost of the \$2.59 million project will be offset with matching funds from Mosaic and other local stakeholders.

Thank you for your thoughtful consideration of this application. Please let me know if you have any questions or if I can assist with additional information.

Regards,

A handwritten signature in black ink that reads "Bill".

Bill Esbeck

122 W. Washington Ave., Suite 1050 • Madison, WI 53703 • PHONE: 608.256.3866 • WEB SITE: [www.wsta.info](http://www.wsta.info)



March 16, 2022

Mr. Dennis Klaila  
Public Service Commission of Wisconsin  
4822 Madison, Yards Way  
North Tower – 6<sup>th</sup> Floor  
Madison, WI 53705-9100

Dear Mr. Klaila,

White Construction has a mutually successful partnership in place with Mosaic Technologies. In 2021 we partnered with them to build PSC grants in the Prairie Farm and Sand Creek exchanges, completing roughly 300 miles of mainline cable within a tight schedule. We will soon be under contract to build all five of their awarded 2021 PSC grants. We are poised to make significant progress on that work in the coming months. One key element that impacts the success of these projects is that White provides many of the materials. This alignment works well for both parties and helps to avoid the supply chain delays associated with many key materials.

Mosaic is applying for Broadband Expansion Grants in Washburn, Barron, Sawyer, and Dunn Counties. White Construction is committed to making this work a priority and will supply key materials to Mosaic if they are awarded these grants. White carries a large inventory of fiber optic cable and other critical materials. We will be able to allocate a portion of that inventory to Mosaic's grant projects, thereby adding to the likelihood of successful and timely completion of the work.

Mosaic is a key partner of ours. We have a proven track record of completing large projects together in a timely manner and are well positioned to build on that success. Expanding this partnership offers a great opportunity to improve communication services in unserved parts of Wisconsin.

We support and endorse Mosaic's application for this and future Broadband Expansion Grants.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joel Schultz'.

Joel Schultz  
Project Manager, White Construction  
[joels@whiteconstruction.net](mailto:joels@whiteconstruction.net)  
920-543-5687

(920) 885-9932



200 Front Street



Suite 3A

PO Box 900



Beaver Dam, WI 53916